State Regulatory Commissions Project
Six Months Progress Report

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Executive Summary

A project was undertaken by AM/FM International in January, 1990 to inventory and work with state utility regulatory commissions or public utilities commissions (PUCs). The project was initiated in response to increasing AM/FM activities in utilities. Opportunities exist to provide leadership and proactive support to assist utilities to maximize the adoption and use of AM/FM/GIS technologies. Progress to date includes a survey with responses from 39 of 50, or 78% of the states' commissions, and a survey of AM/FM International's User Affiliates. A majority (75%) of those responding support the project to work with the commissions. Further work will identify specific AM/FM/GIS activities and needs of the state commissions, including their review of AM/FM/GIS activities in regulated utilities. The project will maintain this knowledge base and potentially educate commissions to help promote commonality and maximum effective use and adoption of AM/FM/GIS in utilities. The development of a collaborative effort with the National Association of Regulatory Utility Commissioners (NARUC) can result in numerous future benefits to the utility industry and AM/FM International.

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1. Project Benefits and Opportunities

The project is resulting in a variety of current and potential benefits for the AM/FM industry and AM/FM International. Some examples include the following:

* Heightened responsiveness of AM/FM International to membership needs;
* Education of state commissions about AM/FM and the association;
* Determination of a designated contact person in each state commission regarding AM/FM/GIS that will be useful for future surveying and educational efforts;
* Development of an initial knowledge base about AM/FM/GIS activities within state commissions, including their awareness and review of activities in utilities;
* Incubation of a new niche for the AM/FM industry in state commissions;
* Promotion of commonality across the states which will facilitate transfer of information from state to state, aggregation of activities in the country as a whole, and easier marketing efforts for providers of services and products;
* Development of a partnership with NARUC which can result in the industry and association having a strong role in the initiation and formulation of guidelines and standards for all regulated utilities; and
* Initiation of an effort that will increase the potential for utilities to receive favorable response and funding approval by state PUCs for AM/FM/GIS projects in utilities.

The project's background and progress to date is reviewed in the following pages. AM/FM International has begun and can further develop an educational effort, knowledge base and partnership with the state regulatory utility commissions which regulate most utilities. The members of AM/FM International and the National Association of Regulatory Commissioners (NARUC) share some common interests and goals that can serve as a foundation for a variety of future activities.

2. Project Background

2.1 Opportunities for AM/FM Leadership

The growth and importance of the AM/FM industry is evidenced in many ways. This project to inventory activities in the PUCs, and begin a joint educational effort, was initiated in response to this trend. The need and opportunities for utilities to take a leadership role was described by Del Hock, Chief Executive Officer of Public Service of Colorado in his keynote address at the July, 1989 Executive Management Symposium. He suggested:

* Utilities should develop relations with others and share data;

* Pioneering activities will create business opportunities for utilities; and

* Utilities may have to fund significant information development activities that will be of benefit to others.

2.2 Regulatory Utility Commissions' Influence on Utilities

States governments are becoming increasingly active in geographic information coordination and development. Many are adopting plans, policies and standards that are impacting the activities of utilities, local governments and others within their states. State regulatory utility commissions are recently becoming active in statewide efforts. They also directly impact the AM/FM/GIS activities of utilities through rate and service review. Evidence of this increasing influence on utilities was described at the Regulatory Considerations Panel at the July, 1989 Symposium. Conclusions and observations of the panel included:

* There have been examples where PUCs have reviewed AM/FM projects without information to make informed decisions, resulting in less than preferred decisions;

* PUCs have a general lack of understanding of AM/FM;

* As AM/FM projects continue to develop, there is increasing potential of PUC review and associated impact on projects; and

* There is growing need to educate PUCs to enable them to understand AM/FM and associated costs before rate setting hearings or prudency reviews.

It is expected the above trends will increase at a growing rate in the future, resulting in more needs and opportunities to understand, educate and work with outside entities to promote the interests and growth of the AM/FM industry. State PUCs are important to the AM/FM industry because they directly and uniquely influence the activities and funding of utilities.

2.3 Common Interests of Utilities and Commissions

Utilities and state PUCs share a number of common interests that form a foundation for collaborative activities. Some examples include:

* Provide the public with the best possible service at the lowest possible cost;

* Eliminate redundancy, incompatibilities and rate disputes that can be aided by better information, but at the same time providing flexibility;

* Support activities to increase safety and maximum value from utility investments while reducing mistakes, public inconvenience and lack of service; and

* Growing conclusions that staffs of both utilities and PUCs can be more effective through the use of AM/FM/GIS.

Moreover, AM/FM International and the National Association of Regulatory Utility Commissioners (NARUC) have common interests in proving services for their memberships. For example:

* Promotion of uniformity among utilities to facilitate understanding of issues, activities and trends across the country;

* Support of research and educational activities to promote information sharing and meet member needs; and

* Desire to prepare for future association needs and work with others to do so in a cost effective manner.

AM/FM International and NARUC have much to learn from each other and can build many projects to increase the effectiveness of their memberships and result in more cost effective utility service for the public.

2.4 Description of State Regulatory Utility Commissions

Most utilities, including electric, gas, telephone, water and sewer, are regulated by a state utility regulatory commission, commonly referred to as public utility commissions (PUCs). Virtually all large electric, gas and telephone providers are regulated, as are all investor owned utilities. State commissions also regulate motor carriers, passenger carriers and railroad safety.

PUCs are somewhat unique among state agencies. They are headed by elected or appointed commissioners. Most states have only one commission, however Texas has three commissions with related responsibilities, and New Mexico has two. Of the 53 commissions, 40 have appointed commissioners and 13 have elected commissioners. In addition to commissioners, PUCs often have appointed chief administrative officials, frequently titled Executive Director or Secretary in addition to staffs sometimes greater than 100 employees.

While most commissions are administratively located within the state executive branch under the Governor, just about all PUCs exercise some quasi legislative and quasi judicial power. Instead of mainly deriving their revenues from a state's General Fund, on average state PUCs obtain 60% of their funding from regulatory assessments.

By state statute, the commissions are responsible for the economic regulation of utilities within their jurisdiction through the regulation of their rates and services. Each PUC has different roles and responsibilities, but most have the authority to determine regulatory procedures. For example, most prescribe accounting systems for regulated utilities and set standards for various operations. PUCs determine items permitted in rate base determinations and some can order management audits of a utility's operating performance, structure, objectives and efficiency.

2.5 The National Association of Regulatory Commissioners (NARUC) and Their AM/FM/GIS Activities To Date

NARUC is the official membership organization of the nation's PUCs. In existence for over 100 years, the association studies various subjects concerning the operation of utilities, promotes the uniformity of regulations pertaining to their operations, and promotes cooperation between the states and also related federal agencies.

The association is very active and sponsors a variety of committees and meetings. NARUC has recently shown an interest in AM/FM/GIS. The Subcommittee on Computers began discussion about it while considering the potential for electronic submission of data from utilities to commissions to facilitate review. At the Subcommittee's May meeting, utilities were invited to participate and begin a dialogue to discuss related issues and opportunities. A discussion about AM/FM/GIS was held, but the level of knowledge about activities in PUCs was limited.

In January, AM/FM International initiated this project by collecting information about NARUC. Executive Director Robert Samborski and project consultant Lisa Warnecke met that month with NARUC staff to generally discuss the technology, AM/FM/GIS activities in utilities, and to identify opportunities to work collaboratively with NARUC.

Following this initial contact with NARUC staff, AM/FM President John Bossler sent a letter to NARUC President Sharon Nelson suggesting joint participation in the project. It was difficult for NARUC to make an immediate decision because a meeting was not being held until July. However, through various efforts and discussions between AM/FM, NARUC, the project consultant and others, the matter was referred to the Committee on Finance and Technology.

After further discussions, the Committee Chair, Gerald Gunter, of the Florida PUC, placed AM/FM/GIS and the project on the agenda of their next meeting on July 24. AM/FM International was officially invited to attend the meeting to discuss the technology, activities in utilities and the opportunities for NARUC and its membership to jointly participate in future activities. AM/FM International President John Bossler has agreed to attend the NARUC meeting and make a presentation on behalf of AM/FM International.

During the course of the project, contact was made between the survey effort and the Subcommittee on Computers. The project consultant recommended some sessions for the Subcommittee's next meeting in October, 1990 in Albany. The Subcommittee chair, Mary Rusk, of teh Arkansas PUC, stated that the possibility of some sessions on AM/FM/GIS activities in PUCs and utilities would be welcome. Opportunities exist for AM/FM International members to attend and speak at the Subcommittee's meeting.

3. Project Methodology

After discussions with NARUC staff and others, it was determined that an appropriate method to survey the Commissions in the 50 states would be to conduct a two part survey. The purpose of part one was to determine an appropriate contact person regarding AM/FM/GIS in each commission through a one page questionnaire. The one page questionnaire also asked each PUC about their familiarity with AM/FM/GIS, their commission's use of the technology, and their awareness and review of AM/FM/GIS projects in their regulated utilities.

Similar preliminary determination of an appropriate contact person was the method chosen by the related state survey projects now underway for the state governments as a whole with the Council of State Governments (CSG) and the survey of the state Departments of Transportation by the American Association of State Highway and Transportation Officials (AASHTO). (For further information, see the sidebar to "GIS in the States: Applications Abound," in the June issue of GIS World.)

On April 19, a questionnaire and cover letter was sent to each commission with some background information about AM/FM International. On May 23 a second round was sent to the PUCs not responding to the first mailing. Beginning June 18, the project consultant telephoned PUCs not yet responding to the questionnaire, and questionnaires were faxed to some of these PUCs. Additional calls were made to increase the response rate.

Part two of the project is designed to be a full survey of each commission directed to each designated contact person. AM/FM International project committee members Joyce Rector and Henry Smith submitted questions for the survey. The next step is to develop a survey draft, submit it for review, and then distribute it to each commission.

While part one of the survey effort was underway, some AM/FM International user affiliates expressed varying opinions regarding the project and survey effort. As a result, it was decided to conduct a survey of the user affiliates to determine the nature, scope and content of the survey effort, and if that effort should be continued and expanded. This survey was conducted by AM/FM International staff in June. Almost half of the affiliates responded to the survey. To date, the response to specific questions determined:

* Almost 26% had officially discussed AM/FM project funding with their commission.

* Of these, almost 20% stated that their commission provided a favorable response concerning funding AM/FM projects. None reported an unfavorable response.

* 75% supported AM/FM's surveying of commissions regarding AM/FM.

* Almost 75% stated it would be helpful for AM/FM to educate commissions by establishing a dialogue with NARUC. Almost 20% of the favorable responses stated the effort should be carefully directed by AM/FM International.

4. Part One Questionnaire Results

4.1 Tabulated Responses

Of 50 surveys distributed to state commissions, responses were received from 39 state commissions. Multiple responses were permitted to each question. Responses are as noted in the attached summary table and questionnaire.

The questionnaire had three distinct parts. Respondents were first asked to identify a contact person for AM/FM/GIS. The designated contacts ranged from a couple chief administrative officials to various data processing directors, auditors, engineers and a draftsperson.

Question #1 asked about the commissions' familiarity and use of AM/FM/GIS in house.

This question revealed that eight commissions are using the technology and eight more are planning to use or considering its use in the future. Of the remaining respondents, twelve stated they had some familiarity and twelve others said they were not familiar with the technology. A third of these states were referred to their statewide GIS coordinator designated by their Governor. It appears there is a definite need to educate these commissioners about the technology. Some expressed interest by specifically asking for information, and others showed evidence of taking some initiative to learn about and gather some information about it on their own.

Question #2 asked about the commissions' awareness and review of any AM/FM/GIS projects in their regulated utilities.

Eleven respondents were not aware of any utilities in their state using the technology. All but two of them had also responded to question #1 that they were not familiar with the technology in general. These responses indicate the need for education, particularly since some of these responding commissions do have activity in their state's utilities.

Of 28 states responding they were familiar with the technology in one or more utilities, seven stated they had officially reviewed such a project in one or more utilities. Of the seven, two, California and Indiana, had done so as part of a rate setting review and they allowed cost recovery for the projects.

4.2 Survey Comments

Various states provided written comments in addition to the responses to the questions. Below are some comments provided by state commissions.

Kansas

The Kansas Corporation Commission recently conducted an analysis which recommended the development of an automated system. It is currently conducting a AM/FM/GIS pilot project. The study concluded that the "current mapping system is one of the most important tools for staff's use in the analysis of complicated issues". However, it stated that the manual mapping system was costly and did not provide for future mapping needs. It was determined that automated base maps would be less expensive than purchasing hard copy versions. Further, it was determined that an automated system would "better support staff's decision making responsibilities, which (would) in turn allow staff to better serve the general public and other state agencies".

Mississippi

The Mississippi Public Service Commission contracted with the Mississippi Automated Resource Information System (MARIS) in 1988 to help develop a plan to automate the commission's information. MARIS is a consortium of over 23 state agencies dedicated to providing geographic information management capabilities through the use of GIS and related technologies. Computing hardware and software, and a database about the state, is maintained at MARIS. MARIS conducted a needs assessment for the Commission, and its recommendation to install a work station there is now being implemented. MARIS is assisting throughout the effort.

North Dakota

The North Dakota Public Service Commission is using Autocad to maintain computerized maps of utility siting exclusion and avoidance areas.

New Hampshire

The New Hampshire Public Utilities Commission is using PC ARC/INFO. The commission stated "several water utilities and a major gas utility are implementing AM/FM systems. We are working with them to exchange information with a goal of being able to ship maps and geographic information back and forth on floppy disk. Other utilities are showing interest and we are encouraging cooperation."

Ohio

The Public Utilities Commission of Ohio is "in full use of an in house GIS" with software developed by the University of Akron. "The PUC has interfaced with various utilities and their GIS systems. Research continues with several Rural Electric Cooperatives in GIS generation and applications."

Tennessee

The Tennessee Public Service Commission stated "another agency has a GIS and we are actively pursuing the establishment of an operating account with them. But in relation to its use we have not looked at that technology to support utility regulation, but the regulation of railroads. I would be interested in any approaches for utility applications".

Texas

The Public Utility Commission of Texas installed an Intergraph work station in the fall of 1989.

4.3 General Findings and Conclusions

The survey reveals that of those commissions using, planning or considering use of AM/FM/GIS, the approaches, applications, and technologies vary greatly. Some commissions are working with their utilities and other state agencies. For example, Ohio and New Hampshire are actively interfacing data with utilities. Different systems, including Autocad, ARC/INFO, Intergraph and individualized software are being used on a variety of hardware platforms.

An important role of commissions is to maintain boundary maps of service areas of various utilities. As concluded by Kansas, the expense and demand for individualized mapping products is growing. While in some cases utility service area boundaries are fairly static, in several states some territory is still unallocated. Commissions developing automated mapping are using a variety of data sources, including USGS quad sheets (in Ohio), and in most others, state department of transportation maps.

A wide variety of applications is being considered and developed by commissions. Applications for utilities, including siting of transmission lines and facilities, and pipeline safety, were identified, as well as potential real estate management and railroad regulation applications. The information provided by the first questionnaire will help us develop the second survey to better reveal existing and planned technologies, uses, and current and planned sharing of data and review of AM/FM/GIS activities in utilities.

Some additional information was obtained through various discussions with NARUC and PUC staffs. General interest and support was expressed for the effort. A number of commissions requested more information and stated they were looking forward to a copy of the questionnaire results from parts one and two. One PUC staff member stated that a nationwide effort was particularly valuable because some service areas cross state boundaries. It was noted that commonality among state PUCs was a growing trend and it was particularly important due to the telecommunications industry largely being served by eight Bell operating companies.

One PUC staff member stated that by using this technology, "PUCs and utilities can work in cooperation, not in an adversarial role. Money can be saved and a better product produced". Another commented about the productivity savings documented by their regulated utility and that recovery was "faster than expected." Some utilities responding to the survey sent by AM/FM International stated that PUC reviews of their AM/FM systems had been positive.

5. Recommendations

As noted in the benefits section above, progress during the last six months has been significant to build an initial knowledge base, promote AM/FM International and create a valuable foundation for future work. While the complete survey has not been conducted yet as originally designed, determination of AM/FM International's interests began later than expected. In addition, official discussion with NARUC was difficult since no meetings were held between January and July.

5.1 Relations with NARUC

President John Bossler will meet with NARUC's Committee on Finance and Technology at the NARUC Summer Conference on July 24. At that meeting, a review of AM/FM, AM/FM International, the State Regulatory Commissions Project, and potential opportunities for collaborative activates can be discussed. Written materials including a revised version of this report should be prepared for distribution to the Committee. This external report can also be the results distributed to the PUC contacts as we stated we would provide in return for their response to the initial questionnaire. NARUC could be asked for their formal support and participation in the Part two survey at this meeting.

AM/FM International also has the opportunity to participate in the October meeting of the Subcommittee on Computers. If interested, probably a panel could be organized for members to speak and interactive dialogue could occur at the meeting. It is recommended that the association participate in this activity.

5.2 Internal AM/FM International Activities

In response to the user affiliate survey, it is recommended that AM/FM International expand the existing committee for the project. The purpose of the committee would be to guide the project's activities over the coming months to finalize the report for public distribution, the Part two survey and related activities.

5.3 Part Two Survey

Efforts should be made to complete the contact list for all 50 commissions. This can be accomplished during the coming weeks. At the same time, the draft survey can be prepared and reviewed by the committee. The conference planning committee is interested in a report on the project in San Diego, so this can be a realistic time for a finalized report on both surveys.

5.4 Report of Part One Questionnaire

A report of the existing questionnaire is needed. It is recommended this progress report be revised to be this report. A decision is needed whether the list of designated contacts should be an attachment to this report in addition to the attached table.

5.5 Related Activities

The nature of the part two survey and its contents can be determined by the committee. The list of contacts should be maintained. Case studies can also be prepared to serve as background for potential sessions at the San Diego conference and the July Symposium.

AM/FM INTERNATIONAL
STATE REGULATORY COMMISSIONS QUESTIONNAIRE

Please return the following questionnaire on automated mapping/facilities management (AM/FM) and geographic information systems (GIS) by May 11, 1990 to the following address:

Lisa Warnecke
256 Greenwood Place
Syracuse, NY 13210

Suggestions and/or questions? Please call Lisa at (315) 478-6024.

Name of Your Agency _____

Name of Designated Contact for AM/FM/GIS _____

Title _____ *Phone* _____

Address _____

1.) Please indicate your familiarity with and your commission's use of geographic information systems (GIS) and automated mapping/facilities management (AM/FM) technologies. Check all that apply and provide a brief comment where appropriate to clarify.

1.1 __7__ We are currently using AM/FM/GIS technology in house
1.2 __2__ We are using AM/FM/GIS technology operated by another state agency
1.3 __6__ We are planning to use AM/FM/GIS technology in the future
1.4 __5__ We are considering its possible use
1.5 __12__ We're familiar with AM/FM/GIS technology but aren't considering commission use at this time
1.6 __12__ We are not familiar with AM/FM/GIS technology

Please discuss your responses on the back of this page, and attach any descriptive information.

2.) Please indicate your commission's awareness and review of any AM/FM and GIS projects in your regulated utilities. Check all that apply and provide a brief comment where appropriate to clarify.

2.1 __21__ We are aware of AM/FM/GIS projects in one or more utilities
2.2 __7__ We have officially reviewed such a project in one or more utilities
2.3 __2__ We have officially reviewed such a project specifically as part of a rate setting review
2.4 __2__ We have allowed cost recovery for investments in AM/FM/GIS technology
2.5 __13__ We are familiar with the use of the technology, but have not officially reviewed it
2.6 __11__ We are not aware of any utilities in our state that are using this technology

Please discuss your responses on the back of this page, and attach any descriptive information.

You will receive a copy of the state survey results. Thank you for your assistance!

AM/FM International - State Regulatory Commissions Project
Part I: Preliminary Survey Results - Warnecke, July 6, 1990

#1 - Commission's general familiarity and internal use of GIS and AM/FM
#2 - Commission's familiarity and review of AM/FM/GIS projects in utilities
39 states responding to date

	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	2.4	2.5	2.6
Alabama												
Alaska												
Arizona					x						x	
Arkansas					x		x	x				
California					x		x	x	x	x		
Colorado		x	x	x			x	x				
Connecticut						x						x
Delaware							x				x	
Florida			x				x					
Georgia					x						x	
Hawaii					x			x				
Idaho						x						x
Illinois						x						x
Indiana				x			x	x	x	x		
Iowa				x							x	
Kansas	x	x					x	x				
Kentucky												
Louisiana												
Maine					x		x				x	
Maryland					x		x				x	
Massachusetts												
Michigan				x		x						x
Minnesota						x						x
Mississippi	x						x					
Missouri												
Montana						x						x
Nebraska	x						x					
Nevada					x		x				x	
New Hampshire	x						x					
New Jersey												
New Mexico						x						x
New York			x				x				x	
North Carolina					x						x	
North Dakota	x											x
Ohio	x						x	x			x	
Oklahoma					x						x	
Oregon												
Pennsylvania						x						x
Rhode Island												
South Carolina												
South Dakota						x					x	
Tennessee			x				x					
Texas	x						x					
Utah						x	x					
Vermont					x		x					
Virginia						x						x
Washington					x		x				x	
West Virginia												
Wisconsin			x				x					
Wyoming			x	x		x						x
TOTALS	7	2	6	5	12	12	21	7	2	2	13	11